

AUG 18 2004

K041933



**Nucletron**

**NUCLETRON B.V.**

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The Netherlands

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Department of Health and Human Services  
Centre of Device and Radiological Health  
Office of Device Evaluation  
Special 510(k) section

**510(K) SUMMARY OF SAFETY AND EFFECTIVENESS INFORMATION**  
as required by section 807.92(c)

**Submitter of 510(k):**

Company name: Nucletron Corporation  
Registration number: 1121753  
Address: 8671 Robert Fulton Drive  
Columbia, MD 21046  
Phone: 410-312-4100  
Fax: 410-312-4197  
Correspondent: Lisa Dimmick  
Director Assurance & Regulatory Affairs

**Modified Device Name:**

Trade/Proprietary Name: MicroSelectron PDR  
Common/Usual Name: Afterloader  
Classification Name: Remote controlled radionuclide applicator system  
Classification:  $^{21}\text{Cr}$ 892.5700 Class II  
Product Code JAQ

**Legally Marketed Device(s)**

Our device is substantially equivalent to the legally marketed predicate device cited in the table below:

Manufacturer	Device	510(k) #
Nucletron BV	MicroSelectron HDR	K953946

**Description:**

The microSelectron Afterloading System concerns a microSelectron -HDR (V2) with 18 treatment channels. The operator console of the microSelectron Afterloading System concerns a PC running dedicated Treatment Console Software, which is similar as in the predicate device microSelectron-HDR (V2). Treatment plans are transferred from the radiotherapy treatment planning software to the Treatment Console Software by file transfer. Connection to a LAN is only for the purpose of File Transfer of Treatment Plan Files. It is the same as in the predicate device where treatment plans are transferred to the Treatment Console Software from radiotherapy treatment planning software running on a separate computer.

The radiotherapy treatment planning software is not part of this 510(k) submission. Applicators and Transfer Tubes as available for microSelectron-HDR (V2) are also applicable for the microSelectron Afterloading System. Pulsed Dose Rate (PDR) is added as a modality to the Nucletron microSelectron Afterloader system.

The PC based Afterloader workstation is the current TCS workstation, but ported to from a Windows 3.11 to a Windows XP platform. The PC based Afterloader workstation comes with functionality to support PDR procedures (i.e. Scheduling of treatments).

The modifications to the previously cleared device K953946 are:

- Addition of RCU and NSD previously cleared device K902533
- Addition of Radiation Status Indicator
- Changes to TCS to enable the PDR workflow
- Addition of Smoothbase, part of previously cleared device K031158

The software runs on a PC with a Windows XP platform.

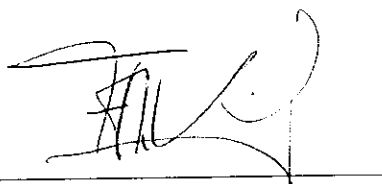
**Intended use:**

The modified device has the same intended use as the legally marketed predicate device cited:

The MicroSelectron PDR is intended to enable an operator to apply, by remote control, a radionuclide source into the body (including Interstitial, Intracavitary, Intraluminal, Bronchial, Endovascular and Intra-operative) or to the surface of the body for radiation therapy.

**Summary of technological considerations:**

MicroSelectron PDR is substantially equivalent to the cleared predicate device, microSelectron HDR, 510(k)#: K953946.

A handwritten signature in black ink, appearing to be 'J. Hill', written over a horizontal line.

5 July 2004

Name: Frits van Krieken  
Title: Business Segment Manager  
Nucletron B.V.  
Veenendaal, The Netherlands

Date



Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

AUG 18 2004

Ms. Lisa Dimmick  
Director Assurance & Regulatory Affairs  
Nucletron Corporation  
8671 Robert Fulton Drive  
COLUMBIA MD 21046

Re: K041933  
Trade/Device Name: MicroSelectron HDR  
Regulation Number: 21 CFR 892.5700  
Regulation Name: Remote controlled radio-nuclide  
applicator system  
Regulatory Class: II  
Product Code: 90 JAQ  
Dated: July 16, 2004  
Received: July 19 2004

Dear Ms. Dimmick:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

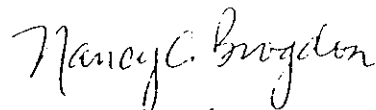
This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at one of the following numbers, based on the regulation number at the top of the letter:

8xx.1xxx	(301) 594-4591
876.2xxx, 3xxx, 4xxx, 5xxx	(301) 594-4616
884.2xxx, 3xxx, 4xxx, 5xxx, 6xxx	(301) 594-4616
892.2xxx, 3xxx, 4xxx, 5xxx	(301) 594-4654
Other	(301) 594-4692

Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97) you may obtain. Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address <http://www.fda.gov/cdrh/dsma/dsmamain.html>.

Sincerely yours,



Nancy C. Brogdon  
Director, Division of Reproductive,  
Abdominal and Radiological Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

Enclosure

## Indications for Use Statement

510(k)  
Number

K041933

Device Name

MicroSelectron PDR

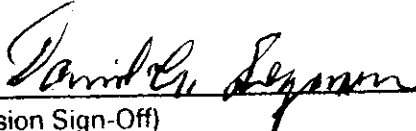
Indications for  
Use

The MicroSelectron PDR is intended to enable an operator to apply, by remote control, a radionuclide source into the body (including Interstitial, Intracavitary, Intraluminal, Bronchial, Endovascular and Intra-operative) or to the surface of the body for radiation therapy.

PLEASE DO NOT WRITE BELOW THIS LINE - CONTINUE ON ANOTHER PAGE  
IF

NEEDED

Concurrence of CDRH, Office of Device Evaluation (ODE)

  
(Division Sign-Off)  
Division of Reproductive, Abdominal,  
and Radiological Devices  
510(k) Number K041933

Prescription Use ☒  
(Per 21 CFR 801.109)

OR

Over-The-Counter Use ☐